

FACT SHEET

INTENT TO REISSUE A HAZARDOUS WASTE POST-CLOSURE PERMIT

Facility Name: Y-12 National Security Complex

Location: Oak Ridge, Anderson County, Tennessee

Facility Address: Y-12 National Security Complex
U.S. Department of Energy (U.S. DOE)
Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, Tennessee 37831-8620

Owner/Operator: U.S. Department of Energy

Co-Operator: Bechtel Jacobs Company LLC

Regime: Bear Creek Hydrogeologic Regime (BCHR)

Units: S-3 Site, Oil Landfarm, and Bear Creek Burial
Grounds/Walk-In Pits

Identification Number: TN3 89 009 0001

Permit No.: TNHW-

Comment Period: Begins: September 22, 2003
Ends: November 5, 2003

PURPOSE

This fact sheet is prepared pursuant to Rule 1200-1-11-.07(7)(d) for the draft hazardous waste post-closure permit renewal for U.S. DOE and Bechtel Jacobs Company LLC, EPA I.D. Number TN3 89 009 0001, located at DOE Y-12 National Security Complex, Oak Ridge, Tennessee. The permit as proposed includes conditions for continued post-closure care and monitoring of the three closed hazardous waste disposal units in the Bear Creek Hydrogeologic Regime, namely: the S-3 Site, the Oil Landfarm, and the Bear Creek Burial Grounds/Walk-In Pits. The conditions for continued corrective action of solid waste management units (SWMUs) and areas of concern (AOCs) at Oak Ridge Reservation (ORR) are addressed in a separate hazardous waste permit, TNHW-010. These conditions require notification of imminent hazards, and when applicable both permits will require compliance with the requirements developed under land disposal restrictions and organic air emission standards.

The purpose of this permitting process is to afford any interested persons the opportunity to evaluate the ability of the permittee to apply the applicable hazardous waste management requirements. The proposal is for the renewal permit to be reissued under the authority of the Tennessee Hazardous Waste Management Act of 1977, as amended, Tennessee Code Annotated, Section 68-212-101 et seq., and Rule Chapter 1200-1-11, Hazardous Waste Management. The permit is prepared in accordance with

the provisions of Tennessee Rule 1200-1-11-.07. Previous public notice opportunities for the post-closure portion were provided with a pre-application meeting public noticed on February 13, 2001, and held on March 15, 2001 by the permittees. The Part B application was received on April 2, 2001, which continues the permit until a final decision is made.

PERMIT HISTORY AND PROPOSED PERMIT

For post-closure and corrective action, the DOE Y-12 National Security Complex has been divided into three hydrogeologic regimes: Bear Creek Valley, Chestnut Ridge and Upper East Fork Poplar Creek (UEFPC). Each regime has a separate post-closure permit for the hazardous waste post-closure units located within that regime. The proposed permit only concerns the three post-closure units in the Bear Creek Hydrogeologic Regime.

The S-3 Site HWDU was a surface impoundment closed in 1988 as a hazardous waste landfill located in Bear Creek Valley (BCV), near the west end of the DOE Y-12 National Security Complex (formerly known as the Oak Ridge Y-12 Plant). The Oil Landfarm, closed in 1990, is a Hazardous Waste Disposal Unit (HWDU) located in BCV, about one mile west of the S-3 Site. The Oil Landfarm consists of three separate disposal areas, with a total of 24 disposal plots, combined into one unit. The BCBGs/WIPs consists of Burial Grounds (BG) A-North and BG A-South, closed in 1989; BG C-West, closed in 1990; and the WIPs, closed in 1994. These units are closed HWDUs located within the BCBG waste management area, about 2.5 miles west of the S-3 Site.

The S-3 Ponds were constructed in 1951 and operated until 1983 as a disposal site for liquid waste and sludge from Y-12 operations. Three general types of waste were disposed in the ponds: (1) liquid wastes generated by Y-12 operations and other facilities, (2) sludge from neutralization and biodegradation of pond waters and from treatment of acidic raffinate, and (3) contaminated sediments from two lagoons (referred to as the "Blue Lagoons") in the Bear Creek channel to the southwest of the site. Waste discharged into the ponds consisted primarily of nitric acid and other acids, nitrate wastes, pickling and plating wastes, machine coolants, caustic solutions, depleted uranium in nitric acid solution, technetium in raffinate and condensate, and miscellaneous liquid wastes (mop waters) associated with routine cleanup and operations at the Y-12 Plant.

Disposal of hazardous waste at the Oil Landfarm HWDU began in 1973 and ended in 1982. The facility was used for the biological degradation of waste oil and machine coolants via landfarming, a process involving the application of waste oils and coolants to nutrient-adjusted soil during the dry months of the year (April to October). After application, the plots were cultivated frequently to maintain aerobic conditions to enhance biodegradation of the wastes. Waste was not applied immediately before or after periods of precipitation. Approximately one million gallons of wastes were disposed at the site.

BG A-North and BG A-South are two of several waste disposal sites within the BCBG Waste Management Area (WMA). Between 1955 and 1979, BG-A (North and South) was used for disposal of a variety of hazardous and non-hazardous wastes, including certain types of solvents and solvent-contaminated water, oils and coolants, mop water, heavy metals (beryllium and uranium), salts, debris, and material contaminated with radioisotopes. Wastes were either discharged directly into oil disposal pits, discharged into standpipes in the burial trenches, or burned in an open tank. Both BG A-North and

BG A-South were closed with wastes left in place and covered with multi-layer, low permeability engineered caps in 1989.

Beginning in 1962, the BG C-West burial trenches (designated as C-16 through C-21) were used for the disposal of numerous hazardous and non-hazardous wastes including: beryllium; beryllium oxides; metals, chips, and oxides contaminated with depleted uranium; enriched uranium; thorium; technetium; lithium; solvents; small quantities of acids; oils and coolants; asbestos; and solid waste contaminated with these materials. Waste oils and coolants, which contained varying amounts of organic compounds (potentially with PCB content), were used to bathe uranium chips before disposal. Hazardous waste disposal at BG C-West was terminated in 1981.

The WIPs were first used in 1966 for the disposal of uranium and thorium saw fines, and shock-sensitive materials. From 1968 until 1980, the area was also used for above-grade burial of acids, bases, and organics. Before closure, the WIP also received non-hazardous waste (shredded metal containers) that was generated during closure of Kerr Hollow Quarry.

The permit is for the renewal of the hazardous waste post-closure permit. This reissuance will allow DOE and Bechtel Jacobs Company LLC, to continue post-closure care and monitoring for the three units. The permit will be valid for 10 years. The first post-closure permit was issued to the S-3 Site disposal unit to DOE on September 30, 1991. The two other units were added as Class 3 modifications to the permit. The Oil Landfarm disposal unit was effective as of June 30, 1995, and the Bear Creek Burial Grounds/Walk-In Pits disposal unit was effective as of September 12, 1995. This permit was valid for 10 years and expired on September 30, 2001. DSWM received the permit renewal application from DOE and Bechtel Jacobs Company LLC, on April 2, 2001, thus a timely submission enables the facility to continue post-closure care until a final decision is made.

Rule 1200-1-11-.06 requires that hazardous waste land units that close with waste in place must begin a thirty-year post-closure permit period at the time of closure. Post-closure care requires the facility to maintain and monitor the closed unit in a manner that is protective of human health and the environment. The proposed permit contains specific conditions that detail the procedures and frequencies for inspections and for groundwater monitoring at the three units, including the reporting requirements and response actions. However, the S-3 site has groundwater contaminant plumes that affect both the Bear Creek and UEFPC Hydrogeologic Regimes. The requirements for groundwater monitoring, reporting and response for contamination in the UEFPC regime are found in the Upper East Fork Poplar Creek Hydrogeologic Regime Post-Closure Permit, TNHW-089.

TECHNICAL CONTACTS:

For further information contact Mr. David G. Adler at 865-576-4094 or write to him at U.S. DOE; P.O. Box 2001, MS-EM-913; Oak Ridge, TN 37831; (fax no.: 865-576-5333 and e-mail address: adlerdg@oro.doe.gov) or contact Mr. Ed Trujillo at 865-241-6728 or write to him at Bechtel Jacobs Company LLC, Building K-1007, Mailstop 7053; Oak Ridge, TN 37831; (fax no.: 865-576-6339 and e-mail address: trujilloe@bechteljacobs.org).

COMMENTS

Copies of the draft permit, fact sheet, and the public notice are available for public inspection from 8:00 a.m. to 4:30 p.m., Monday through Friday, except legal holidays, at the TDEC Department of Energy Oversight Division Office, 761 Emory Valley Road, Oak Ridge, Tennessee (telephone 865-481-0995); and TDEC Knoxville Environmental Assistance Center, Public Access Area, Suite 220 – State Plaza, 2700 Middlebrook Pike, Knoxville, Tennessee 37921 (telephone 865-594-6035). These materials may also be viewed at the: Oak Ridge Public Library, Civic Center, 1401 Oak Ridge Turnpike, Oak Ridge, Tennessee (telephone 865-482-8455); Kingston Public Library, 1004 Bradford Way, Kingston, Tennessee (telephone 865-376-9905); and at the DOE Oak Ridge Information Center, 475 Oak Ridge Turnpike, Oak Ridge, Tennessee (telephone 865-241-4780).

The regulations under Rule 1200-1-11-.07(7)(e) require that a 45 day comment period be instituted for each draft permit under the Hazardous Waste Management Act. The comment period will begin on **September 22, 2003**, which is the date of publication of the public notice in the major local newspaper of general circulation, and will end on **November 5, 2003**.

Because a public hearing was not scheduled by the Division, the public may request a public hearing on the proposed actions during the comment period under Rule 1200-1-11-.07(g). A public hearing will be required if on the basis of requests (1) a significant degree of public interest in the proposed actions is found or (2) upon written notice of opposition to the draft permit and request for a hearing. If a public hearing is to be held, a public notice shall be given at least 30 days before the hearing.

All persons including the applicant, who believe that the tentative decision to issue this permit is inappropriate must raise all ascertainable issues and submit all available arguments and factual grounds supporting their position by sending their comments to: Ms. Dilraj Mokha; Treatment, Storage, and Disposal Section; Division of Solid Waste Management; Tennessee Department of Environment and Conservation; 5th Floor, L&C Tower; 401 Church Street; Nashville, TN 37243-1535; phone 615-532-0821 or e-mail to dilraj.mokha@state.tn.us. To assure consideration, comments must be received by 4:30 p.m. November 5, 2003.

When the DSWM makes a final permit decision to either issue or deny the permit, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final decision. The final permit decision shall become effective upon signing by the Director of DSWM.

Persons who wish to be on DSWM's mailing list should request a Mailing List Request form by calling or writing: Public Participation Officer; DSWM; TDEC; 5th Floor, L & C Tower; 401 Church Street; Nashville, Tennessee 37243-1535; telephone 615-532-0798 or e-mail Solid.Waste@state.tn.us.